TOPCON

VisiChart™

User Manual

Version 1.23

Topcon VisiChart™ User Manual
Revision Control

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1. System Components

- VisiChart™ All-in-One System
- Remote Control
- Dual-function Infrared Detector
- USB Keyboard
- USB Mouse
- Power Cable
- Wall Mount Adapter Plate
- Wall Mounting Bracket & Hardware
- Mouse Pad
- User Manual
- Two AAA Batteries

2. Hardware Specifications

Operating System
Windows® XP

Processor
Intel Pentium 4

Chipset
i945g chipset

Dimensions/ Weight
16.1"W x 13.9"H x 3.78"D (w/o stand)
16.1"W x 17"H x 8.5"D (w/stand)
25.5 lb (w/stand)
21.6 lb (w/o stand)

Memory
512k DDR2 SDRAM

Video
Integrated Intel GMA graphics

Display
17" SXGA LCD panel, 1280 x 1024

Storage
80GB 2.5" hard drive, DVD/CD-RW combo drive

Network Interface
Integrated Intel 10/100/1000 Gbit Ethernet

Wireless LAN
802.11b,g wireless LAN

Audio
2-Channel High-Definition audio, integrated 2x speakers

Expansion Slots
Two Type II slots or one Type III PCMCIA slot

I/O Ports
Two PS/2 ports (keyboard/mouse)
Four USB 2.0 ports (4x on chassis)
One serial port
One parallel port
One RJ45
One VGA
Audio ports (Mic-in, Line-in, Line-out)

Power
Input: AC/100~240V (50/60Hz) 4.0A

Certification
FCC, CE, UL

3. Mounting the VisiChart™

Direct View: When mounting the VisiChart™ directly in front of the patient, the center of the monitor should be approximately 54” off the floor and centered in front of the patient sitting in the exam chair. Recommended minimum direct view distance from patient is 3 meters. (Approximately 10 feet)

Mirrored View: When mounting the VisiChart™ behind the patient and using a mirror to increase the total refraction distance, the center of the VisiChart™ should be located 78” off the floor and 18” from the center of the chair, opposite the stand, so that the near-rod does not interfere with the image presented in the mirror.

Electrical: It is recommended that a standard electrical outlet is installed behind the VisiChart™ for best appearance; however the VisiChart™ can be plugged into any outlet within five feet of the mounting location.

Remote Control Sensor: Plug the USB connector into any USB port on the side of the VisiChart™. Attach the sensor to the VisiChart™ with the enclosed Velcro pad to any location facing into the exam room. Bundle and conceal the cable behind the VisiChart™.

> **Note**: The use of fluorescent lighting in the exam room will decrease the sensitivity of the remote control. Incandescent lighting during VisiChart™ use is recommended.

3.1. Wall Mounting the VisiChart™

1. Remove the silver plastic cover on the rear of the VisiChart™ to expose the screws which attach the table mount base. (Figure 1)

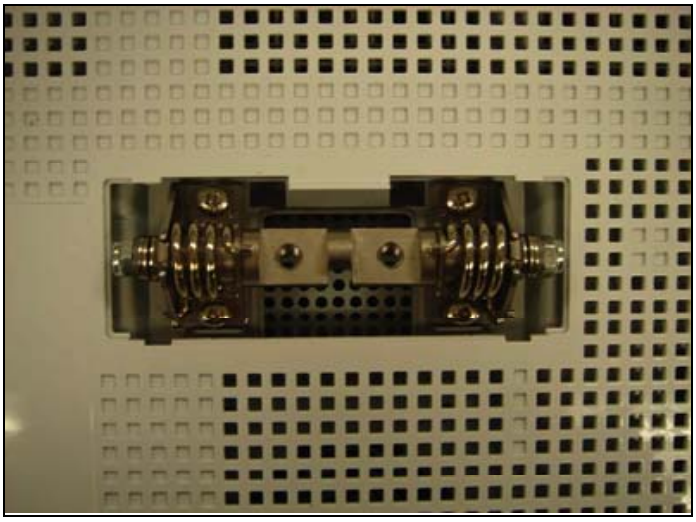


Figure 1

2. Loosen the four M4 Phillips screws and remove the hinge and base. (Figure 2)

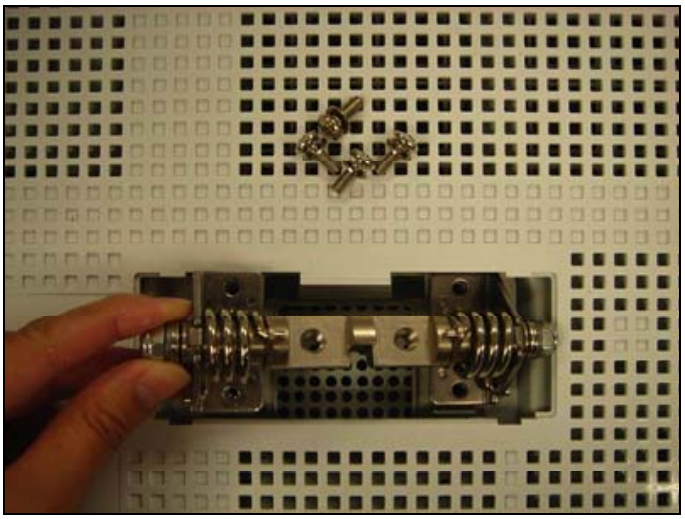


Figure 2

3. Using the M4 screws, attach the wall mount adapter plate. (Figure 3)

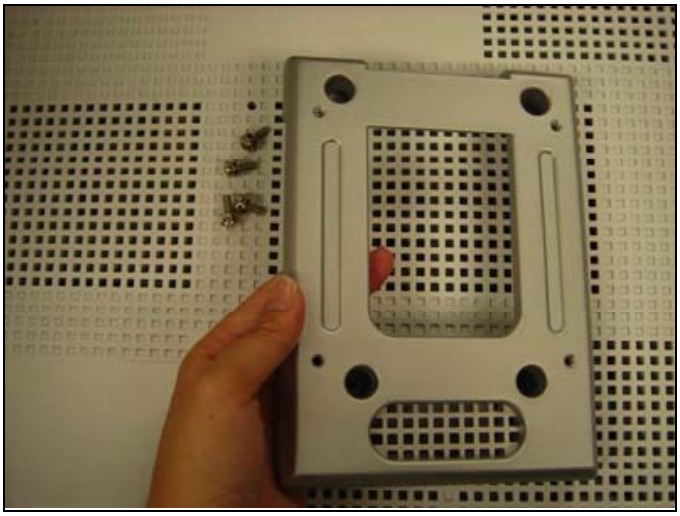


Figure 3

4. Tighten the four screws securely. (Figure 4)

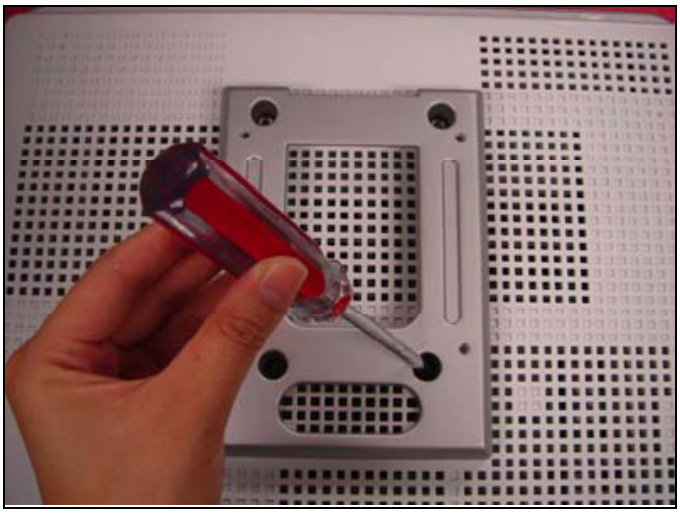


Figure 4

5. Installation of the wall mount adapter plate is now complete. (Figure 5)

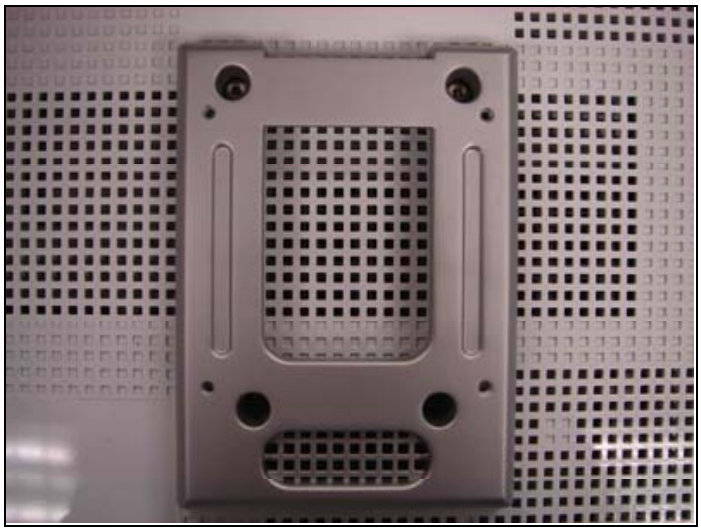


Figure 5

Note: For the wall mount bracket installation, a qualified installer should follow the instructions which are included with the bracket.

4. VisiChart™ Features

Charts

- Snellen
- HOTV
- Numbers
- Allen Pictures
- Tumbling E's
- ETDRS Charts
- Contrast

Isolations

- Horizontal Line
- Vertical Line
- Single Character
- Three Lines Same Size
- Pointer for Horizontal and Vertical Lines

Additional Features

- Customizable Test Sequence
- Red/Green Duochrome available for All Charts
- White Optotypes on Black Background Available for All Charts
- Worth 4 Dot Test
- Single Fixation Dot
- Full Randomization of All Charts
- Black Screen
- Corner Size Indicator
- Astigmatic Dials and Fixation Disparity
- Cycle Timer for Hands-free Randomization
- Fixation Animation
- Size buttons for 20/10 – 20/400
- Compatible with CV-5000 Vision Tester

5. Turning On the VisiChart™

1. To turn the VisiChart™ on and begin testing, press the power switch on the front of the system.
2. VisiChart™ will automatically launch the Snellen chart.

6. Turning Off the VisiChart™

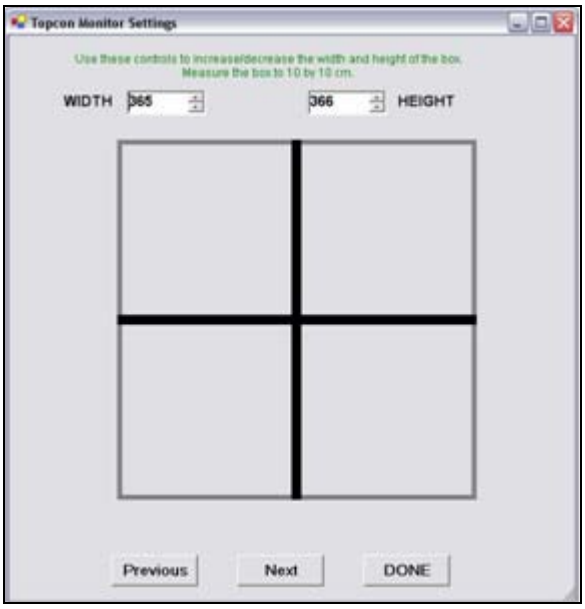
1. Exit VisiChart™ by pressing ALT + BLACK on the remote control.
2. VisiChart™ will exit to Microsoft Windows.
3. Press the power switch on the front of the system and the system will power off.

7. Configuring VisiChart™

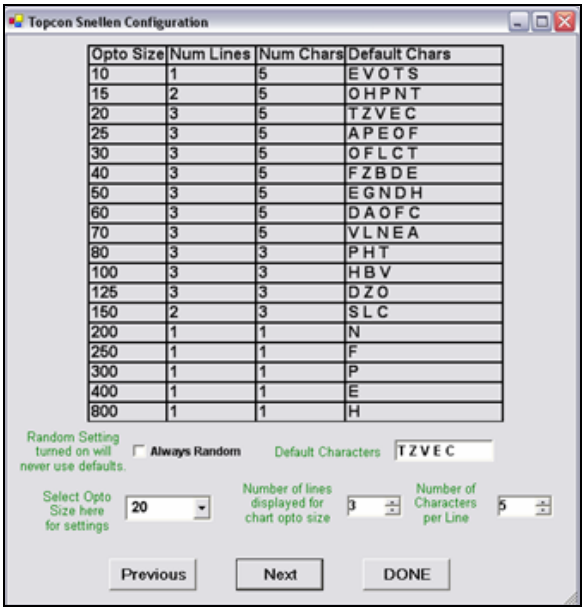
1. Plug in the keyboard and mouse into the VisiChart™ before starting the system.
2. Plug in the Dual Infrared Detector. It is compatible with the remote control and the CV-5000 Vision Tester.
3. VisiChart™ will launch.

Topcon Screen Configuration
Welcome to Topcon configuration screens!
Use these screens to personalize your acuity system. Use the Back and Next buttons to flip through the screens.
Distance from the bridge of the patient's nose to the screen.
Feet
Meters
15.00
Position of screen whether it is direct view, or mirrored.
Direct
If you have more than one monitor you can select which monitor the acuity system will display to.
1440x900\\.\DISPLA
Previous
Next
DONE

4. Press “?” on the keyboard to enter the configuration screens.
5. Set the distance, measuring from the bridge of the nose to the VisiChart™. With a mirrored room, measure from nose to mirror and the mirror to the VisiChart™, adding these numbers.
6. Set **Direct** or **Mirror.**
7. Click **Next**.



8. Set the 10 cm by 10 cm square.
9. Click **Next.**

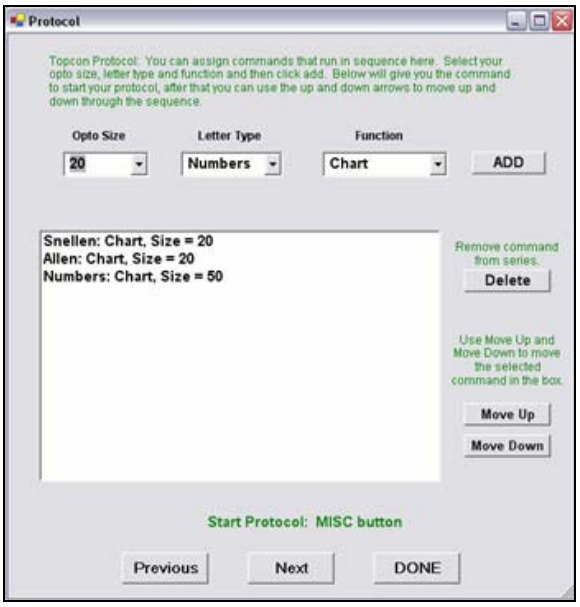


Opto Size	Num Lines	Num Chars	Default Chars
10	1	5	E V O T S
15	2	5	O H P N T
20	3	5	T Z V E C
25	3	5	A P E O F
30	3	5	O F L C T
40	3	5	F Z B D E
50	3	5	E G N D H
60	3	5	D A O F C
70	3	5	V L N E A
80	3	3	P H T
100	3	3	H B V
125	3	3	D Z O
150	2	3	S L C
200	1	1	N
250	1	1	F
300	1	1	P
400	1	1	E
800	1	1	H

10. Set the **Black Screen Timer** if desired, the display will go to a black screen in the set number of minutes.

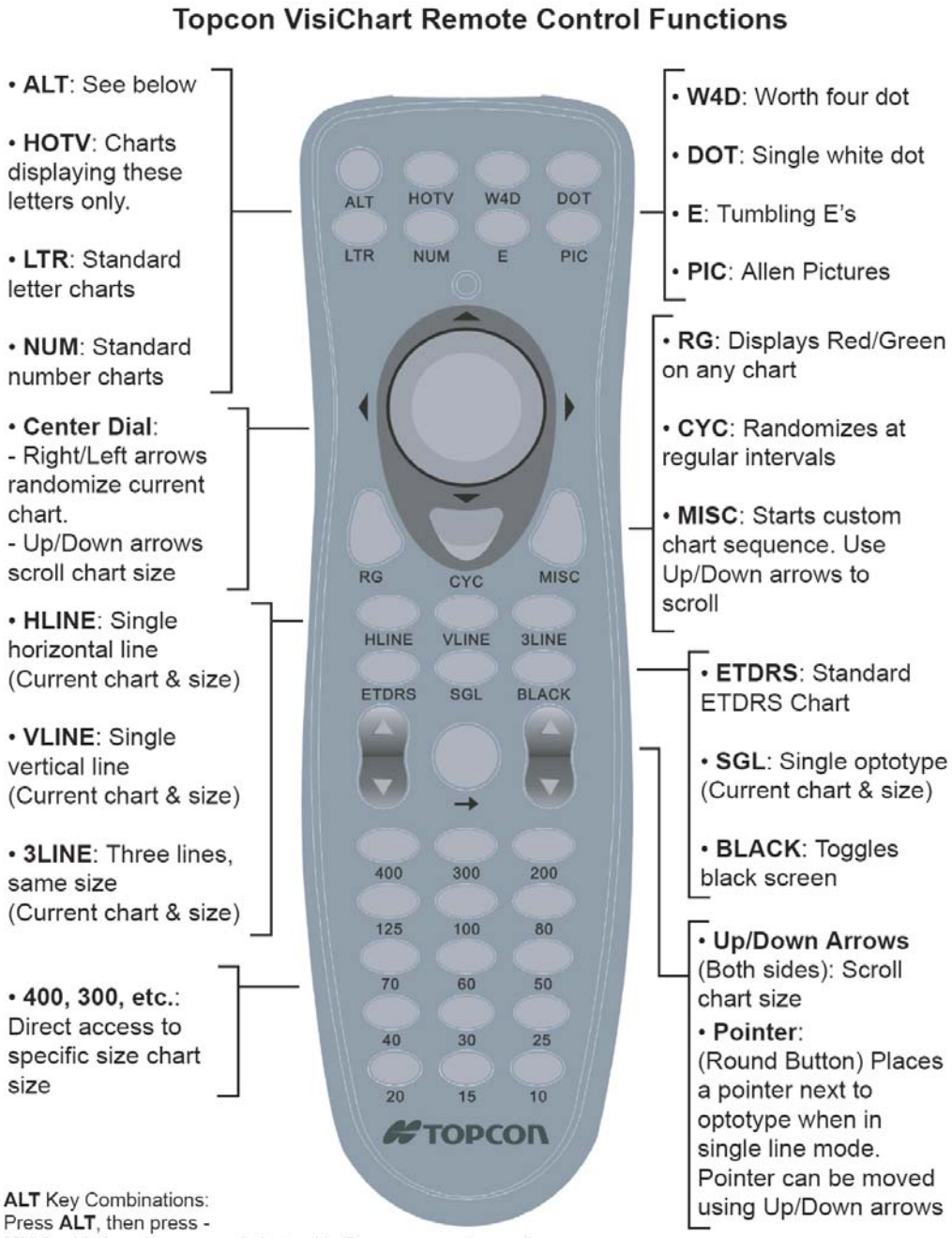
Topcon timers and preferences
Blank Screen Timer (Minutes) amount of time the application has no activity before the screen goes black
20
Random Letter Timer (Seconds) amount of time when in random mode before the letters randomize
4
Check box determines whether the opto size will be displayed in the bottom left corner when the application
Show Screen Size
Radio buttons determine whether your worth 4 dot will use green or blue dots
Green Worth 4 Dot
Blue Worth 4 Dot
Previous
Next
DONE

11. Set the **Random Letter Timer** if desired.
12. Set whether to **Show Screen Size** Note this can be toggled with ALT + W4D.
13. Set whether to use a Green or Blue Worth 4 Dot.
14. Click **Next.**
15. Optional – Click **Next** to continue without modifying the default chart options.
16. The Default Chart can be adjusted, changing the number of rows and number of optotypes shown per line.
17. Check **Always Random** to never show the default chart.
18. Using the **Select Opto Size here for settings** choose a line of the chart.
19. The **Number of lines displayed** and **Number of Characters per Line** as well as the **Default Characters** can now be set.
20. Repeat 17 and 18 for each line.
21. Click **Next** to continue.
22. Optional **Test Sequence (Protocol) Setup** – click **Next** if a customized sequence is not needed.


Protocol
Topcon Protocol: You can assign commands that run in sequence here. Select your opto size, letter type and function and then click add. Below will give you the command to start your protocol, after that you can use the up and down arrows to move up and down through the sequence.
Opto Size
Letter Type
Function
20
Numbers
Chart
ADD
Snellen: Chart, Size = 20
Allen: Chart, Size = 20
Numbers: Chart, Size = 50
Remove command from series.
Delete
Use Move Up and Move Down to move the selected command in the box.
Move Up
Move Down
Start Protocol: MISC button
Previous
Next
DONE

23. Choose a **Size, Chart** and **Function** using the drop-down controls and click **Add.**
24. Continue adding charts.
25. By clicking on the newly added row, use **Move Up** and **Move Down** to order the list.
26. Use **Delete** to remove any item not needed.
27. When complete click **Next.**
28. The main calibration screen is again shown, click **Done.**
29. The VisiChart™ is now ready for use.
    The Snellen chart displays.

8. VisiChart™ Remote Diagram


Topcon VisiChart Remote Control Functions
• ALT: See below
• HOTV: Charts displaying these letters only.
• LTR: Standard letter charts
• NUM: Standard number charts
• Center Dial:
- Right/Left arrows randomize current chart.
- Up/Down arrows scroll chart size
• HLINE: Single horizontal line (Current chart & size)
• VLINE: Single vertical line (Current chart & size)
• 3LINE: Three lines, same size (Current chart & size)
• 400, 300, etc.: Direct access to specific size chart size
• W4D: Worth four dot
• DOT: Single white dot
• E: Tumbling E's
• PIC: Allen Pictures
• RG: Displays Red/Green on any chart
• CYC: Randomizes at regular intervals
• MISC: Starts custom chart sequence. Use Up/Down arrows to scroll
• ETDRS: Standard ETDRS Chart
• SGL: Single optotype (Current chart & size)
• BLACK: Toggles black screen
• Up/Down Arrows (Both sides): Scroll chart size
• Pointer: (Round Button) Places a pointer next to optotype when in single line mode. Pointer can be moved using Up/Down arrows
ALT HOTV W4D DOT
LTR NUM E PIC
RG CYC MISC
HLINE VLINE 3LINE
ETDRS SGL BLACK
400 300 200
125 100 80
70 60 50
40 30 25
20 15 10
TOPCON
ALT Key Combinations:
Press ALT, then press -
MISC = Various lesser used charts. Up/Down arrows to scroll.
BLACK = Exit VisiChart software to Windows.
W4D = Toggles on-screen size display of top line size.
HLINE = Toggles black to white optotypes on black or white background.
RG = Contrast Chart. Use Up/Down buttons to change contrast.
HOTV = Animated Fixation.
Note:
1. Pressing the same key again randomizes any chart currently displayed.
2. Current chart size represents top line shown on screen.

9. Using the VisiChart™

VisiChart™ is controlled with the remote control. The chart below provides information on each function

Button	***Function***
ALT	Provides access to lesser used functions
HOTV	HOTV Chart
W4D	Worth 4 Dot Test
Dot	Fixation Dot
LTR	Snellen Letter Chart
NUM	Number Chart
E	Tumbling E Chart
PIC	Allen Pictures Chart
Round L & R	Randomize the current chart
Round U & D	Increase/Decrease chart size
RG	Red/Green Duochrome Chart
CYC	Randomize the chart every four seconds
MISC	Custom Chart Sequence
HLINE	Horizontal Line
VLINE	Vertical Line descending in size
3LINE	Three lines of same size
ETDRS	ETDRS Charts
SGL	Single Optotype
BLACK	Black Screen
Up/Down	Increase/Decrease Chart Size
Arrow	Add a pointer to the Horizontal or Vertical Line – use up/down to move
400 – 10	Directly set the top line of the chart or the horizontal line to be that size
	NOTE: For ALT functions, the ALT key should be pressed and released.
ALT - MISC	Astigmatic Dials and Fixation Disparity
ALT - BLACK	Exit VisiChart™
ALT - W4D	Toggle the Corner Size Indicator
ALT - HLINE	Reverse the chart for white optotypes on black screen
ALT - RG	Contrast Line – Use Up/Down to increase/decrease contrast percentage
ALT - HOTV	Fixation Animation

9.1. Troubleshooting Procedures

The VisiChart™ troubleshooting section summarizes some common issues and possible areas to check to resolve the problem. If the matter is related to VisiChart™ operation, please refer to other sections of this User Manual for detailed information on the operation, adjustment, and features of the VisiChart™. If the issue cannot be resolved by using the trouble-shooting guide, a Topcon authorized customer service technician should be contacted for assistance.

Issue/Problem	Possible Solution
1. VisiChart™ does nothing (no power light or function)	1a. Check to see if the VisiChart™ is connected to the AC power source, and that the power source is live. 1c. Check cabling for damage.
2. VisiChart™ is ON, but does nothing (Black Screen, no function from remote control)	2a. Unplug and re-plug the IR sensor. 2b. Check remote control batteries. 2c. Press power button to restart system.
3. VisiChart™ is ON and displays a chart, but does not respond to remote control.	3a. Unplug and re-plug in IR sensor. 3b. Check remote control batteries. 3c. Press power button to restart system.
4. VisiChart™ starts, but an error during start-up occurs before displaying a chart.	4a. Press power button to restart system. 4b. Call Topcon customer service for assistance.
5. VisiChart™ starts, but a “keyboard not found” error during start-up occurs before displaying a chart.	5a. Verify that the IR sensor is firmly plugged into a USB port and restart the system by pressing the power button. 5b. Call Topcon customer service for assistance.

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VisiChart™
PN 2034000105

Specifications subject to change